EOCENE CRABS IN A LONDON CLAY NODULE

by J. COLLINS

ABSTRACT. The outstanding features of a number of crabs, belonging to three species, present on a single nodule from the London Clay (Upper Ypresian), are here described. Comparisons made with existing descriptions reveal certain new structures to one of the species; a new geographical recording is also made.

THIS paper describes a nodule which, although only 60 mm. in length and 40 mm. at its broadest part, contains no less than twelve individual crabs visible on its surface. All the specimens, which are casts, are preserved with their original convexity and represent three species: *Campylostoma matutiforme* Bell, *Laeviranina gottschei* (J. Böhm), and *Mithracia libinioides* Bell. *C. matutiforme* is the most prolific, there being seven examples, all juveniles; whereas of the other two species, each represented by one example, *L. gottschei* may by comparison with other specimens—in the British Museum (Natural History)—be regarded as approaching the adult stage, and *M. libinioides* (Pl. 12, figs. 3, 3*a*) as being an adult. The remaining three specimens are obscured by matrix and are indeterminable.

Occurrence. London Clay (Upper Ypresian), Lower Eocene, Isle of Sheppey. The nodule is now in the University Museum, Oxford, the individual specimens being numbered L55 to L66.

Campylostoma matutiforme Bell

Plate 12, figs. 1, 1*a*

Although the specimens (L55–L61) are juveniles, they show to a marked degree the characteristics of the adult; they are, however, rather more rounded in outline.

The five antero-lateral spines (of which the external-orbital forms the first) are well developed, and although no one specimen is entire a sound composite conception may be formed of their structure. The second to fourth pairs are about the same size, triangular in outline, rounded above and slightly upturned. The fifth is considerably more robust and is produced to a length almost equal to three-quarters of the carapace width at the base of these spines. The spine projects at right angles to the antero-lateral margin and is granulated like the carapace. Its borders are parallel for almost half the length, after which the anterior border, armed with five or six spinules, curves back towards the apex.

On the specimens examined by Bell (1857) this spine had been broken off close to the carapace, and although he thought it might have been produced into a long spine, he claimed that the short length of spine preserved in one individual (1857, pl. 3, fig. 9) was hypertrophied. This diagnosis has led to some misrepresentation of the outline of this species and it has been figured (e.g. Salter and Woodward 1865) with all the antero-lateral spines of nearly equal size. Measurements (taken from the most complete example, L55): length, along median line, 13·3 mm.; width, anterior to fifth spine, 13·9 mm. Total width, including fifth spine, *c.* 32·0 mm.

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Laeviranina gottschei (J. Böhm)

Plate 12, figs. 2, 2*a*

Coming as it does from the Isle of Sheppey the geographical range of this rare species, hitherto recorded in Britain from Herne Bay, Highgate, Oxshott (Brown and Castell 1954), and Tolworth, is yet further extended. Measurements (L62): length, along median line, 15·9 mm.; width, 10·5 mm.

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EXPLANATION OF PLATE 12

Fig. 1. The nodule (×1) showing dorsal view of *Campylostoma matutiforme* (L55) and left lateral view of *Laeviranina gottschei*. The anterior part of another *C. matutiforme* may also be seen. 1*a*, Portion of fig. 1 enlarged, ×2.

Fig. 2. The nodule (×1) showing dorsal view of *L. gottschei* and frontal view of *C. matutiforme* (L55). 2*a*, Portion of fig. 2 enlarged, ×2.

Fig. 3. The nodule (×1) showing the carapace of *Mithracia libinioides*; the right lateral margin of *L. gottschei*, part of specimen L55 (at the top of the photograph) and several other examples of *C. matutiforme* may also be seen. 3*a*, Portion of fig. 3 enlarged, ×2.

Eocene, Upper Ypresian, London Clay, Isle of Sheppey.